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ABSTRACT

The Michigan Center for Career and Technical Education (MCCTE) at Michigan State University conducted a study on a rural college (dubbed "Riverdale") in the Midwest to collect quantitative and qualitative data that could be used to improve student retention in developmental courses. The research team analyzed student profiles, student experiences as related to developmental education courses, and the role and perceptions of staff involved in the courses. Also, a survey was mailed to 14 withdrawal students. Findings include: (1) of the 1,397 students enrolled in developmental courses between 1994 and 1998, 73% were female, 94% were white, and the mean age was 31; (2) female students tended to receive a higher percentage of satisfactory grades than males; (3) 6.9% of the students withdrew from developmental courses; and (4) male students withdrew from courses more often than females. Based on these findings, the research team made many recommendations to Riverdale, including: (1) set appropriate expectations of students; (2) integrate study skills with all developmental courses; (3) match student's learning style with teaching style; (4) create separate programs to serve special needs students; and (5) require completion of developmental courses before enrolling in college courses. Contains 20 references. (EMH)

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Developed by the
Michigan Center for Career and Technical Education
Michigan State University

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A Study of Student Retention and Attrition in a Community College's Developmental Education Program

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Developmental education students make up a significant proportion of the total student enrollment of many community colleges throughout the country. For these students, academic and career aspirations often hinge on successfully completing courses that are intended to prepare them for future college work and ultimately secure meaningful employment. Unfortunately, many of the students who enroll in developmental education courses withdraw before successfully completing them. One rural college in the upper Midwest is not satisfied with its 39.9 percent attrition rate, even though that rate is better than average. The college would prefer a rate closer to 25 percent. The Midwest college – which, for the purposes of this report, is referred to as Riverdale College – is the subject of the study that follows.

Purpose and methodology

The overall purpose was to provide faculty and staff of the college with information they could use to improve the retention of students in developmental education. The focus was on students who were or are currently enrolled in developmental education courses and to determine:

1. Why these students would withdraw from developmental education courses?

2. What were the instructional, curricular or institutional policies or procedures that may be contributing to attrition among this group of students?

3. In what ways the institution and program staff may respond to help reduce attrition among this group of students thus increasing the likelihood of experiencing academic success within their program.

The MSU research team working with college staff collected and analyzed data that addressed the following: student profiles, student experiences as related to skills development courses, and the role and perceptions of staff

2 Purpose and Methodology

involved in the skills development courses. Skills Development (SD) is the term Riverdale College uses for its developmental education (DE) courses.

This study used traditional methodology to collect both quantitative and qualitative data to illuminate a deeper understanding of why students withdraw from developmental education before completing their goals for the courses. The research team developed a profile of students in developmental education using databases maintained by the college. Data analysis was carried out using the Statistical Package for the Social Science (SPSS). The primary statistical procedures employed were frequency distribution, percentage, mean scores, standard deviation, t-test and Analysis of Variance (ANOVA). The conventional .05 level was set as the criterion for significance for the t-test and ANOVA. The data analysis would attempt to answer the following questions:

Student profiles

1. Who are the students in developmental education in terms of age, gender, race, prior educational achievement and academic abilities?

2. In what ways, based on demographic information, do the students who drop out differ from those who persist to complete their goals?

3. What changes have occurred in the DE program over the past five years? How have those changes influenced or affected enrollments in DE classes?

4. What curricular structures and materials and instructional strategies are currently used in the DE program?

The research teams also interviewed 19 students, five teachers, three administrators, and two counseling personnel. The interviews aimed to answer the following questions:

Students' experiences

1. What were the students' goals or objectives for enrolling in the program?

2. What was the nature of their prior experience in education? How does their experience of DE compare to these prior experiences? How satisfied are students with their experiences in DE?

3. What were the situations surrounding their decision to leave the program? What was going on in their lives at the time?

4. What are they doing now? What plans do they have for the future? What role will postsecondary education play in those plans?

5. What do the students consider to be a good or effective educational experience? How do these descriptions compare to their experience in the DE program?

Perceptions of faculty and staff

1. What is their understanding of the nature of the attrition problem in DE?

2. What do they see as the primary reasons why students leave the program?

3. What do they believe can be done to increase student retention in the program and the likelihood of academic success among these students?

A survey was designed to collect information about the Riverdale College's skills development courses from students who withdrew from the program. The survey contained eight questions, and was constructed to elicit the following information:

1. What course(s) were they enrolled in at the college?

2. What specific things were positive about the course(s)?

3. What things about these courses would they like to see changed?

4. What factors contributed to their decision to withdraw from the course?

5. What factors may have kept students going to class?

6. What was their experience with the ASSET tests?

7. What else could they tell about their decision to withdraw from the college's skills development course?

8. What would bring them back to enroll in the skills development courses at the college?

The survey was mailed to 14 withdrawal students on May 1, 1998. A cover letter was included in the packet explaining the purpose of the survey, emphasizing its importance and significance, and stating how the results would be used. A stamped envelope addressed to the researcher was enclosed to facilitate return of the surveys. In the cover letter, the researchers asked that the survey be returned by May 11, 1998.

To meet the needs of underprepared students, the Riverdale College offers a developmental education program which includes Skills Development (SD) courses in reading, writing and mathematics. All of the SD courses are offered through an independent lab experience, except two SD math courses (SD 050 and SD 075) which are offered in a traditional classroom setting. The college also offers an efficiency study skills course in a classroom setting.

The lab teachers use textbooks, computers, the Internet, videos and supplemental materials to teach SD courses. The classroom math instructor uses textbooks and workbooks as well as cooperative learning activities to teach the SD math classes. The classroom math courses meet three days a week at regular class times. Attendance is monitored and students must meet attendance expectations to pass the course. The lab is open all day Monday through Thursday and Friday morning. It also offers evening hours during the week. Students in lab courses are expected to complete course requirements and are advised to attend a minimum number of hours in the lab. Although attendance is not mandatory for passing the course, the college's own research shows a strong correlation between lab attendance and course completion.

Counseling staff go beyond meeting the academic needs of students. Students receive support for dealing with such concerns as health issues and family problems.

Support services at the college are extensive. Located across the hall from the lab is a counseling and tutoring office. Any student is eligible for tutoring services through the college which coordinates the work of peer and professional tutors. Students with documented learning disabilities receive special support services such as note-takers and books on tape. The college's student services department coordinates all student assessments and advises students in academic placement, including placement in Skills Development courses. Counseling staff go beyond meeting the academic needs of students. Students receive support for dealing with such concerns as health issues and family problems.

The Skills Development program at the college has four teachers: two full-time teachers and one part-time teacher in the lab, and a college math

6 Definitions

Definitions

Developmental education (DE) – A course of instruction that prepares students for success in college-level courses. At the college, developmental education is referred to as Skills Development.

Continuing Student – A student currently enrolled in a skills development (SD) course.

Completer – A student who successfully completes a skills development (SD) course with a satisfactory (S) or passing grade (Numeric).

Non-Completer – A student who officially withdrew successfully or unsuccessfully in a skills development course and the instructor assigns a Withdraw Pass (WP) or Withdraw Fail (WF) or fails the course at the end of the semester or unofficially withdrew, receives an Unsatisfactory grade (U).

ASSET (Assessment of Skills for Successful Entry and Transfer) – A student advising and placement assessment used by community colleges. Academic skills are measured with timed tests in Writing, Reading, and Mathematics. The results are used for advising and course placement at the college. Cut-off scores for college placement in regular classes are: Math – 55, Reading – 53, and Writing – 54.

instructor who teaches the SD math courses in the classroom setting. The classroom math courses differ from the lab classes in that the classroom experience is based on a conceptual approach to mathematics.

Also serving skills development students is a team of three counselors and 30 tutors and note-takers. Program administrators include the Dean of Liberal Arts, the Vice President of Instruction and the Dean of Occupational Programs.

Over the past five years, there have been several changes to the college's developmental education program. In 1995, the college began offering the classroom component to the skills development math courses. Within three years the math classes have been offered, the content and structure of the classes have changed to incorporate teamwork, projects, and a conceptual approach to content. The lab facility became more conducive to independent study when ASSET tests were administered outside of the lab instead of in the lab's quiet room.

Developmental education students make up a significant proportion of the total student enrollment at Riverdale College, similar to many community colleges in the state and nation. Academic and career aspirations of students often hinge on successfully completing these courses that are intended to prepare students for future college work and ultimately secure meaningful employment. Research supports developmental education as an equalizer to academic achievement. A 1996 report by Mary Wall reports that students who tested into developmental courses and completed a required developmental course persisted at the same or a higher rate as students who tested at college-level. Yet students who tested into developmental courses but did not remediate had significantly lower retention rates. Student retention in developmental education programs, therefore, is key to student academic success.

Programs that have been enhanced by either increasing student support services or an all-campus effort toward change are showing higher retention rates.

In an attempt to understand how Riverdale College's skills development program fares among similar programs across the nation, the MSU research team conducted a review of literature that examines the success and struggles of developmental education programs in the nation's community colleges. The literature review examines student retention rates, characteristics of learners and innovative practices that have effectively raised program retention rates.

Across the country, community colleges are struggling with their role in meeting the needs of underprepared students. All the community colleges in the United States offer remedial education, yet there have been several attempts by legislatures and other governing bodies to limit or ban remedial education (Ignash, 1997). As a result, community colleges are feeling the push to be more accountable for their programming. Whether or not colleges are responding to the pressure for more accountability, community colleges are looking carefully at their developmental education programs. There is a wealth of recent literature that reviews remedial education programs in community colleges.

Student retention rates

In most of the studies referenced here, retention is measured by student

persistence over one to three years. Successful course completion is generally course completion with a grade of a C or better. Retention rates for developmental education students range from 30 to 50 percent. Programs that have been enhanced by either increasing student support services or an all-campus effort toward change, are showing higher retention rates.

■ In Ohio, the Office of Institution and Planning at Sinclair Community College, reports three-year retention rates of 31 percent for underprepared students who did not remediate; 36 percent for underprepared students who took some developmental courses; and 51 percent for underprepared students who completed all of the required courses (Weissman, 1997). Overall, 40.4 percent of the students were still enrolled after three years (Sinclair Community College, 1994).

■ In Minnesota, a study at Rochester Community College in 1995 revealed 45 percent of students enrolled in developmental education persisted a year later. Furthermore, the study indicated that counselors believe more than 60 percent of academically underprepared students experiences failure and have to withdraw (Mercer, 1996)

■ A study done of Minnesota's community colleges showed students who completed developmental education courses persisted at higher rates than underprepared students who did not complete developmental education courses. One year retention rates for completers ranged from 58 percent to 67 percent; one year retention rates for non-completers ranged from 32 percent to 42 percent (Schoenecker, 1996)

■ At Anne Arundel Community College in Maryland, the one-year retention rate for developmental education students in 1991 was 52 percent; over three years, the retention rate was 40.4 percent, with a rate of 49.6 percent when non-graduation factors were considered (Haeuser, 1993).

■ In Chicago, the college of Lake County in 1994 showed students who remediated had the highest level of persistence with 84 percent continuing from Fall 1992 to Spring 1993. Of those, 45 percent were still enrolled in Fall Semester 1994. Skill-deficient students who did not remediate had the lowest rate of persistence with 37 percent remaining after a semester and only 7 percent enrolled in Fall 1994 (Weissman, 1995).

■ A 1992 report of San Jose City College in California showed developmental education students persisting through the Spring 1992 semester at a rate of 53 percent. Students enrolled in the school's Gateway University, a program enhanced with student support services, persisted at a rate of 72 percent. Sixty-four percent of Gateway University students successfully completed their course, whereas 45 percent of developmental education students not enrolled in Gateway U were successful in their courses (Kangas, 1992).

■ A study done by Miami-Dade Community College showed retention rates of developmental education students after four years. For students who completed all remedial education courses needed, 29 percent were still enrolled. Those who did not complete all their remedial coursework, only 11 percent were still enrolled (Morris, 1994).

Characteristics of learners

Literature indicates minority students are less likely to succeed, and are more likely to be placed in developmental programs. Remedial enrollment rates for blacks and

Hispanics are consistently one and one-half to two times that of white students (McKinney, 1997). Bushnell (1991) reported attrition is a problem for black, Hispanic and Native American students due to the K-12 public school tracking system. According to Bushnell, public schools fail to teach minority students how to take charge of their own learning, and as a result these students exhibit typical characteristics of developmental education students, including:

1. Do not take advantage of services provided;

2. Do not develop close relationships with faculty or college;

3. Feel success in education is a matter of luck, and for minorities a matter of "bad luck." Bushnell claims that high-risk students typically lack social contacts and self-confidence.

Campbell (1996) reported ethnicity, age, and degree-seeking intent were indicators of success. He defined the underprepared student population at a midwestern community college as having a larger percent of minorities. He also said the underprepared student typically attempts fewer credits, has a lower grade point average, and is less likely to indicate degree-seeking intent.

According to Valadez (1994), developmental students "come largely from working class or lower (socio-economic) backgrounds and never had the benefit of teachers or counselors who encouraged academic efforts. Their own families could not provide the direction or support students needed for making decisions about their futures."

Innovative practices

Considering the developmental education student's level of self-esteem, prior learning experiences, lack of external support and lack of direction, the most innovative developmental education programs are improving effectiveness by providing extensive student services, getting an all-campus commitment of faculty and staff to provide and support excellence in developmental education, requiring testing and completion of remedial courses before enrolling in college-level courses, and engaging peer and faculty tutors to work with students on academics and to help students develop positive relationships (Bushnell, 1991; Weissman, 1997). The best programs also work to develop self-esteem, stress the importance of college and help students understand the need for academic success. There also is regular evaluation of the programs. (Bushnell, 1991; Platt, 1993; Boyan, 1997; McMillan, 1997).

Campbell (1996) reported ethnicity, age, and degree-seeking intent were indicators of success.

Weissman (1997) concludes there are four policies colleges need to consider regarding developmental education programs:

1. Underprepared students should be required to enroll in a program of developmental education.

2. Underprepared students should be required to begin their developmental education program on initial enrollment.

3. Underprepared students should be allowed to enroll in college-level courses before completing their developmental education programs as long as they are simultaneously working on remediation.

4. Students underprepared in reading and writing and students underprepared in reading, writing, and math should be required to focus on their developmental education program

before beginning college-level courses.

Administrative support and faculty development appear to be another key to successful programming. A study by Gail Platt (1993) looked at the most successful remedial reading program in the state of Texas – The Learning Center at South Plains College, which had the highest retention rate among the state's seven community colleges among students who completed remediation. The study found the program had four key elements:

1. A talented, dedicated and dynamic faculty
2. Diverse student population
3. Instructional support including facilities, equipment, materials, supplies and administration
4. Administrative commitment to evaluate programs and services and to document effectiveness

Furthermore, all center faculty possess master's degrees with at least 18 graduate hours in an academic discipline. In 1992-93 all center faculty attended a critical thinking workshop, an academic support conference and two teleconferences.

A study most closely tied to the success of developmental education students found the following significant to student success:

1. Centralized or well-coordinated administrative structures
2. Compulsory assessment and placement
3. Tutoring with tutor training
4. Commitment to faculty and staff development, advising and counseling
5. Continuous and systematic evaluation

Centralized structure, tutoring with tutor training and continuous and systematic evaluation were more significant to success than the other variables (Boyan, 1997).

An article by Virginia McMillan (1997) reflects similar recommendations including:

1. Early intervention with underprepared students
2. Comprehensive programs
3. Required entry-level testing and mandatory placement in basic skills courses
4. Full-time director and committed staff provided with ongoing training
5. Comprehensive support services
6. Administrative support
7. Peer support
8. Application of basic skills to real life situations

The same article defines policies common to successful programs. Such policies include:

1. Required orientation for entering students
2. Abolishment of late registration
3. Elimination of dual enrollment in basic skills and college-level courses
4. Encouragement of a reduction in academic loads for working students
5. Financial aid for DE students
6. Problem-solving and literacy activities in all DE courses

Recommendations for faculty and staff include:

1. Volunteer placement of faculty in DE programs
2. Maintenance of contacts between DE faculty and instructors who teach college-level courses
3. Counselors and tutors available to DE students throughout their program (McMillan, et.al, 1997)

Examples of innovative practices

Miami-Dade Community College tackled the issue of retention by a major program renovation (Bushnell, 1991) The aim was to create access that requires excellence. The college mandated student responsibility for academic performance. Testing and placement were mandatory for all first-time college students, those carrying nine hours or more and those signing

up for math or English classes. The college also provided a comprehensive student service network The college suspended 13,000 students during the first five years, indicating its emphasis on excellence. In addition, "the rate of suspensions declined each year as the importance of student excellence took hold. Such an effort requires a major institutional commitment" (Bushnell, 1991).

San Jose Community College's Gateway University program conducts weekly surveys of students within the first four weeks of a semester. Program assistants contact students to determine if they need tutors, if they understand assignments or if they would like to talk to their instructors. It also uses block scheduling and student study groups (Kangas, 1992).

In order to maintain students and increase student success, literature suggests developmental education programs need to consider getting an all-school commitment to excellence, support faculty with appropriate training and professional developmental opportunities, support students with services like academic counseling, personal contacts, interactions with instructors and tutoring. Colleges need to raise the level of expectations and communicate the importance of education to students. Mandatory completion of developmental courses also is proving to be successful for community colleges. For those schools, open access does not mean access to educational opportunity, but access to academic achievement. Finally, regular data collection and program evaluation have been tied to program success.

The findings indicate that the problem of attrition and retention of students in the developmental education program at Riverdale College is multidimensional. Overall the data indicates a retention rate of 61.1 percent. The findings from students who are persisting may be relevant to a better understanding of attrition.

There were 1,397 students, 73.9 percent female, and 26.1 percent male, enrolled in the skills development courses since 1994. Table 1, at right, provides a descriptive profile of the student population by gender, residency, race, age, lab, and SD grade. Additional tables following in the report and in the Appendix provide information on ASSET scores, and other related variables. Findings are then reported from the interviews with students, faculty and staff in terms of how students experienced the program, factors contributing to their withdrawal, and faculty/staff perceptions of the problem of attrition. Other relevant findings that go beyond the initial set of questions also are presented.

<Table 1>
General Demographic Information

Gender	Frequency	Percent
Female	1,032	73.9
Male	365	26.1
Total	1,397	100.0

Residency	Frequency	Percent
In district	900	64.4
Out of district	493	35.3
Out of state	4	.3
Total	1,397	100.0

Race	Frequency	Percent
White	1316	94.2
American Indian	4	0.3
African American	18	1.3
Asian	25	1.8
Hispanic	27	1.9
Others	6	0.4
missing	3	0.2
Total	1,397	100.0

Age	Frequency	Percent
31 - 69 yrs	691	49.5
19 - 30 yrs	690	49.4
missing	16	1.15
Total	1,397	100.0

Lab	Frequency	Percent
Lab	1,055	75.7
Non-lab	227	16.3
Lab + Non-lab	111	8.0
Total	1,397	100.0

SD Grade	Frequency	Percent
Satisfactory	712	61.1
Unsatisfactory	373	32.0
Withdraw/Failing	28	2.4
Withdraw/Passing	53	4.5
Total	1,166	100.0

Age

In recent years, demographic trends show the average age of students participating in post-secondary programs is increasing. The mean age of the 1,381 developmental education students participating in the program since 1994 was about 31 with a range of 19 to 69. A total of 691, or 49.5 percent, of students were born between November, 1929 and October 16,

1968. A total of 690 students, or 49.4 percent, were born between October 17, 1968 and November 13, 1979. Sixteen students, or 0.16 percent of students did not report their birth date and were treated as missing data. Thus approximately 50 percent of the students ranged in age between 31 and 69 (Group A) and 50 percent ranged in age between 19 and 30 (Group B) representing a 38-year span in the former and an 11-year span in the latter. (See Table 2).

<Table 2>

Gender by Age

Gender	31-69 yrs	19-30 yrs	Frequency/Percent
Male	168	188	356 (25.8%)
Female	523	502	1,025 (74.2%)
Total	691 (50.0%)	690 (50.0%)	1,381 (100.0%)

Students in Group A (Age 31 to 69) showed a mean score of 40.02 on the ASSET Reading, 38.35 on the ASSET Writing, and 37.31 on the ASSET Math. Students in Group B (Age 19 to 30) had a mean score of 40.21 on the ASSET Reading, 39.06 on the ASSET Writing, and 38.43 on the ASSET Math. On the t-test of the mean difference between Group A and Group B, Group B had significantly higher scores than Group A in Writing scores ($t=2.20$, $p<.05$), and Math scores ($t=3.64$, $p<.001$). There was no reliable difference between the groups' scores in Reading. (See Table 3)

<Table 3>

ASSET Score by Age

ASSET	31-69 yrs	19-30 yrs	t-test
Reading	N=622	N=628	t=.62
	M=40.02	M=40.21	P>.05
	SD=5.73	SD=5.11	
Writing	N=604	N=612	t=2.20*
	M=38.35	M=39 06	P<.05
	SD=5.62	SD=5.57	
Math	N=638	N=642	t=3.64***
	M=37.31	M=38.43	p<.001
	SD=5.95	SD=4.98	

Student in Group B were twice as likely to take non-lab courses, the difference was 148 students in Group B versus 77 students in Group A. While only 16 percent of the entire group took non-lab courses, 65 percent of that group were in the Group B. In the lab courses, students in Group A spent more hours in the lab, an average of 15 hours, while students in Group B spent on the average of 11.79 hours in the lab. There

was a significant statistical difference in lab hours between the groups at the .001 level. (See Table 4 and Table 5)

<Table 4>
Lab by Age

Lab	31-69 yrs	19-30 yrs	Frequency/Percent
Lab	550	491	1,041 (75.6%)
Nonlab	77	148	225 (16.3%)
Lab and Nonlab	63	48	111 (8.0%)
Total	690 (50.1%)	687 (49.9%)	1,377 (100.0%)

<Table 5>
Lab Hours by Age

Lab Hours	31-69 yrs	19-30 yrs	t-test
	N=600	N=521	t=-5.85***
	M=15.33	M=11.79	P<.001
	SD=10.73	SD=9.31	

Sixty-six percent of the students in Group A successfully completed the SD courses with a satisfactory grade (S), and 55 percent of the students in Group B received a satisfactory grade in the SD courses. An unsatisfactory grade (U) was given to 27 percent of Group A, versus 37 percent in Group B. The data showed that the more mature group of students tended to receive a higher percentage of satisfactory grades. (See Table 6)

<Table 6>
SD Grade by Age

SD Grade	31-69 yrs	19-30 yrs	Frequency/Percent
Satisfactory	409	300	709 (61.5%)
Unsatisfactory	167	197	364 (31.6%)
Withdrawal/Failing	13	14	27 (2.3%)
Withdrawal/Passing	24	28	52 (4.5%)
Total	613 (53.2%)	539 (46.8%)	1,166 (100.0%)

Studies in the past have shown that women are more likely to leave college than men because of social reasons rather than academic, and it may still be important to include gender in studies of attrition. In this study, 74 percent of the developmental education students at Riverdale College were female and 26 percent were male, a ratio of about 3 to 1. Females scored higher on the ASSET Writing tests and males scored higher on the ASSET Math. A t-test of the mean difference on the ASSET tests showed no statistical difference on the Reading and a highly significant difference on the Writing and Math. That is, females tended to get better scores in the Writing (t=4.27, p<.001), while males tended to get better scores in the Math (t=4.63, p<.001). (See Table 7)

<Table 7>
ASSET Scores by Gender

ASSET	Female	Male	t-test
Reading	N=942	N=6321	t=.71
	M=40.16	M=39.92	P>.05
	SD=5.18	SD=6.13	
Writing	N=919	N=308	t=-4.27***
	M=39.09	M=37.53	P<.001
	SD=5.51	SD=5.73	
Math	N=964	N=329	t=4.63***
	M=37.48	M=39.09	p<.001
	SD=5.32	SD=5.90	

Sixty-four percent of the female students successfully completed the SD courses with a satisfactory grade, and 53 percent of male students received a satisfactory grade in the SD courses. An unsatisfactory grade was given to 30 percent of female students, versus 38 percent of male students. The data

showed that female students tended to receive a higher percentage of satisfactory grades, and lower percentage of unsatisfactory grades, compared to male students. (See Table 8)

<Table 8>

SD Grade by Gender

SD Grade	Female	Male	N
Satisfactory	550	162	712 (61.1%)
Unsatisfactory	257	116	373 (32.0%)
Withdrawal/Failing	20	8	28 (2.4%)
Withdrawal/Passing	35	18	53 (4.5%)
Total	862 (73.9%)	304 (26.1%)	1,166 (100.0%)

While not a high number of students are in the Withdraw Pass (WP) and Withdraw Fail (WF) – 6.9 percent WP and WF combined – the data show that male students (8.5 percent) would tend to withdraw more from a SD course with a WP or WF than female students (6.4 percent). (See table 8)

<Table 9>

SD Grades of the Full-time Students with SD course(s)

Year	S	U	WF	WP	Sub Total
94-2	91	72	5	10	178
	51.1%	40.4%	2.8%	5.6%	
94-3	44	41	6	6	97
	45.3%	42.2%	6.1%	6.1%	99.7%
95-1	2	0	0	0	2
	100%				100%
95-2	59	32	3	2	96
	61.4%	33.3%	3.1%	2.0%	99.8%
95-3	36	32	1	3	72
	50%	44.4%	1.3%	4.2%	99.9%
96-1	0	0	0	0	0
96-2	48	22	1	1	72
	66.7%	30.6%	1.3%	1.3%	99.9%
96-3	34	19	1	1	55
	61.8%	34.5%	1.8%	1.8%	99.9%
97-1	0	0	0	0	0
97-2	63	22	2	2	89
	70.8%	24.7%	2.2%	2.2%	99.9%
97-3	54	13	2	2	71
	76.1%	18.3%	2.8%	2.8%	100%
98-1	3	0	0	0	3
	100%				100%
98-2	31	14	0	7	52
	59.6%	26.9%		13.5%	100%
TOTAL	**465**	**267**	**21**	**34**	**787**
	59%	**33.9%**	**2.7%**	**4.3%**	**99.9%**

* excludes SD156 and SD176 grades due to a different grading system
* Total percentages do not equal 100 percent due to rounding

Enrollment Status

Students who took 12 or more credits were considered full time. Since 1994 there were 493 (35.3 percent) students who took more than 12 credits that included SD course(s). Table 9, at left, reports SD grades of these students.

Table 10 shows that of the 1,397 students enrolled in developmental education at Riverdale College since 1994, 151 (10.8 percent) students repeated SD courses more than two times. Courses that were most likely to be repeated were: SD 160, Arithmetic Review 1 - Lab; SD 163, Pre-Algebra Lab and SD 161, Arithmetic Review Lab II. A combined total of 16 cases repeated SD 150, 151, and 152 (Reading courses) more than two times, and a combined total of 16 students repeated the two writing courses, SD 170 and SD 171 more than twice.

<Table 10>

Repeated more than two times

Courses	Frequency
SD 150 (Developmental Reading I - Lab)	7
SD 151 (Developmental Reading II - Lab)	3
SD 152 (Developmental Reading III - Lab)	6
SD 160 (Arithmetic Review I - Lab)	55
SD 161 (Arithmetic Review II - Lab)	28
SD 162 (Systems of Measurement - Lab)	5
SD 163 (Pre-Algebra - Lab)	31
SD 170 (Introduction to College Writing I - Lab)	8
SD 171 (Introduction to College Writing II - Lab)	8
Total	151

STUDENT INTERVIEWS

Factors Contributing to Success

Riverdale College has a 61.1 percent retention rate among developmental education students. Across the country, retention rates for developmental education students range from 30 to 50 percent.

According to student interviews, contributing to the program's success is:

- A supportive, flexible developmental education component which includes independent study with multiple resources.
- The program's student support services which includes counseling, tutoring, one-on-one time with instructors and additional support for students identified with special needs.

Overall, students feel the staff members of the DE program are very helpful and encouraging. All students interviewed said they believe having a positive, supportive relationship with an instructor is important to their success. In fact, for many of the students interviewed, the caring, approachable and supportive staff was the reason they persisted in the program. All students interviewed, including non-completers, indicated the "helpful, caring, wonderful staff" as the strongest asset of the SD program. "They taught me to be patient with myself, not to give up, that if I struggled through, eventually I would make it." The flexibility of the lab, both the open hours of the facility itself and the self-pace of the instruction, also was a strong point for the completers we interviewed. Tutors and other student support services were also cited as strengths of the program. One student specifically cited the assessment and placement process as beneficial to his success in college.

Students' Experiences

Goals for enrolling in program: Many of the students interviewed were returning to education after a long hiatus from school. Reasons for their return included job

displacement, career enhancement and career changes. Most of the women interviewed were returning to school for a nursing career, long after leaving school. Many did not complete the traditional course of education; they dropped out of high school, had children, struggled with odd jobs and then decided to try for a degree and a new career.

The older students seemed to have more internal motivation than the students who attend right out of high school. Two of the withdrawal students interviewed withdrew from classes and have returned to attempt completion of their prerequisite coursework. Each of these students talked about making a shift from being motivated by external factors to taking ownership for their own learning, an internal motivation.

Nature of prior educational experiences and relationship to developmental ed experience: Most of the students interviewed indicated dissatisfaction with their K-12 experience. Many said they did not see the relevance of education to their lives and they did not have much control over how they learned. More than half of the students interviewed talked about having low self-esteem or low self-confidence at the beginning of their skills development program.

Most of the students interviewed rated their experience in Riverdale College's skills development program much higher than their secondary education experiences. Students cited caring teachers, ability to learn in different ways, expanded class times over what is provided in high school and close relationships to instructors as reasons the skills development courses were more enjoyable than their prior education experiences.

Several of the withdrawal students interviewed also dropped out of high school prematurely. Reasons for dropping out of high school included: stress of divorce and moving away from school in the 11th grade; became pregnant and trying to go to school was too difficult; hung around the wrong crowd, skipped a lot and eventually just dropped out. Some withdrawal students however did not indicate any struggles at the secondary level.

Situation surrounding decision to leave the SD progra

External – Withdrawal students interviewed indicated a variety of reasons for leaving the program. Many of the interviewees initially cited external factors as reasons for withdrawal. Personal illness, family concerns, financial considerations all came up.

One student dropped out of school to care for her mother. Another's illness kept her from completing her courses. Those students said they would like to go back and pick up the courses they dropped.

Older students in the program say they have seen younger students miss class or lab and suggest that school does not mean as much to them because they have not seen the other side. The older students who are returning to school because they see it as their last chance at a decent job, say older students are less likely to withdraw.

Programmatic – In several instances, further conversations revealed some level of discomfort with either their performance in the courses or the content of the course itself. Two of the students interviewed said the expectations of the SD math courses were too low. They said they felt like they were in college to attend third or fourth grade classes. Both of these students missed the cut-off scores by a couple of points. Both said they were not motivated to attend the lab because they had so much time to complete assignments. One student said she dropped her SD course because the timed ASSET test was too stressful for her and she didn't see any way she would ever pass it. She said she passed her SD coursework, but couldn't pass the exam.

For some students, withdrawing from SD courses was the result of struggles in college courses. Several students indicated that the skills development courses were less of a priority to them than their college level courses, and when the college level courses became demanding, students put off their SD coursework, eventually either

dropping or failing their SD courses. Another student said her high school did not prepare her for the level of work required in her college writing courses. She scored high enough on the ASSET to be placed in a college level course, but she said that course was too frustrating for her. She said she enjoyed her experience in her skills development courses, but eventually dropped because the college writing course she was taking was creating too much stress. Most of the students interviewed expressed a desire to complete the requirements for enrollment in college courses, although some are afraid to try again.

What are they doing now? What plans do they have for the future? What role will post-secondary education play in those plans? A couple of the students who withdrew from a SD course have re-enrolled in the SD program. One student who did not do well in the classroom setting is trying the lab option, for example. A couple of students expressed a desire to return but also expressed a fear of not succeeding. They are working full-time and are not attending school. They see a college education in their future, but are not ready to return. Another student is attending a different community college, and one is planning to attend a university in the fall.

What do the students consider to be a good or effective educational experience? How do these descriptions compare to their experience in the DE program? All students said relationships with instructors are important to student success, and that the SD program fosters those relationships. Flexibility for meeting individual learning needs is also important to students, and the variety of SD courses as well as flexible and open lab times offer students that flexibility.

Several students interviewed talked about the difficulty in making the transition from the supportive and comfortable lab environment to the more traditional classroom. Part of that difficulty, they said, is that the math lab courses do not go high enough to prepare them for the college-level courses. One student who was having trouble with the transition from the lab to the classroom indicated a dependency on lab staff to succeed in college level coursework. "I just want to go back to my friends in the lab. I know they'll help me."

Students want to be challenged enough to be motivated, and they want to feel good about themselves in their learning environment. The students who said the math program does not push them hard enough described themselves as being uncomfortable in the program.

Perceptions of Faculty and Staff

Staff's understanding of the nature of the attrition problem in developmental education: Teachers in the SD program see students leaving and wonder why. None of the teachers thought the numbers of students withdrawing from the program was terribly different than other developmental education programs, but they were concerned about the students who did leave.

What do they see as the primary reasons why students leave the program? Instructors said that low self-esteem among students is very common and they see it as their role to help students feel better about themselves and gain the confidence they need to succeed in traditional classrooms. The ones who do not make it, say staff, are the students who need help, but cannot bring themselves to ask for it.

Counselors and staff also suggest learning style differences may account for student withdrawals, particularly with students who sign up for lab but need the built-in discipline of a structured class. Data found that students who sign up for a classroom experience have higher ASSET scores than those who choose the lab. Interviews indicate those students better understand their learning needs.

Instructors expressed a desire for more professional development as a way to address the needs of students. Perceptions of the staff indicate that a lack of professional development also inhibits staff's ability to address instructional issues.

Heavy use of timed assessment tests may skew actual abilities of learners resulting

in misplacement and eventual withdrawal. Staff and student interviews indicate that students who are anxious about timed tests and do poorly on them as a result are not comfortable with their placement in SD courses, and often that is because their true abilities were not accurately assessed.

Policies on financial aid grant refunds allow students to retain refunds even if they eventually withdraw from class. Staff interviews indicate students sign up for one credit SD courses to get a greater amount of financial aid. The push for a heavier load in order to get more financial aid may be too much for a study skills student to carry.

Staff members suggest that integration of life skills and study skills would help students better prepare for the transition to the traditional classroom.

Teachers working with SD students feel a need to be better supported with professional development opportunities. Teachers discussed interest in keeping up with the latest information for teaching the math, reading and writing. They also cited a need to stay up-to-date on information and techniques for teaching to students with special needs.

Staff say those students who attend orientation for both the college and the developmental education courses have an opportunity to get acquainted with the learning environment before attending class and therefore feel more comfortable in school than other students. Students who attend orientation say it is helpful for them to feel a part of the school. Literature also supports orientation as important to student success. Yet, only about 30 percent of the student population attends orientation, which is not required for enrollment.

There is a lack of understanding among faculty and staff regarding the 75 percent retention goal. Faculty and staff questioned the high goal as most college's in the country report much lower retention rates. Faculty and staff said they did not know how the college came to use 75 percent as a bench mark for Riverdale's developmental education prog-am.

Staff members indicated that dual enrollment may be setting students up for failure. The indication is that Riverdale College should incorporate some policies regulating the kind of dual enrollments that take place, and in some instances mandate completion of SD courses before allowing enrollment into college-level courses.

Counselors say they prefer the untimed Compass test to the timed ASSET test because it is more realistic in its assessment, but the college is not equipped with enough computers to systematically use the Compass test.

Staff interviews indicate the college's developmental education program has become the area's ABE substitute. Using the skills development program to fill the needs of the community's adult basic education skews student success rates and may create negative identification issues among students.

Other

A staff interview revealed that students who re-test and pass the ASSET test but do not complete the SD course for which they are enrolled are considered unsuccessful. This penalizes the student for accelerating his program, and it hurts the DE program by skewing numbers of successful and non-successful students.

Student interviews revealed a phenomenon regarding student motivation. Many of the students interviewed enrolled in the SD program because of external factors: job displacement, career goals, financial gain. After experiencing successful learning however, these students expressed deep internal motivations for attending school. Learning for them stopped being a means to an end and became an opportunity for growth. "It changed my life" "Even if I won the Lotto, I'd still go to school."

There was some evidence that written material may be communicating unintended messages with regard to the student's ability to succeed. For example, in a tongue-and-cheek piece entitled "How To Fail" the student who has low-self esteem and may be looking for a reason to fail, may take this kind of message far too seriously.

Based on the findings and other research, several areas Riverdale College could explore are examined in an effort to improve student retention and success rates. They are presented here as recommendations for curriculum, professional development, and institutional policies.

Curriculum

- Set appropriate expectations of students.

The students we did talk to who withdrew from the SD math courses did not feel like expectations for the course were high enough, and there were not enough deadlines to keep them coming in.

1. Challenging homework
2. Raise expectations for weekly work
3. Match ability of student to course (refresher vs. remediation)

One college reported combining the college Prep Writing and English Comp in to a 5-credit class. They did the same with College Prep Math and Beginning Algebra. If the students completed all of the objectives, they receive 3 credits toward graduation and complete the material in one semester instead of two.

- Integrate study skills with all Skills Development (SD) courses.

Instructors in the lab said that they saw building self-esteem in students as a big part of their job and a big factor in student success. They suggested that more be done with students to help them as they are working through their lab courses. The following components could be integrated into all SD courses:

1. How to ask for help
2. Building self esteem
3. How to study
4. Resolving conflicts
5. Relevancy of learning to life
6. Practice real-life applications (contextual learning)

- Match student's learning style with teaching style.

Consider assessing students for learning styles and help them find appropriate instructors.

- Create separate programs, if the college's mission calls for it, to serve those ABE or special needs students who need extra support.

Using the skills development program to fill the needs of the community's adult basic education skews student success rates and may create negative identification issues among students.

■ The definition of a completer should relate to the student's ability to meet the goals of the course (i.e. to pass the ASSET test) and not to a set of processes that lead to the completion of the goal.

A staff interview revealed that students who re-test and pass the ASSET test but do not complete the SD course for which they are enrolled are considered unsuccessful.

Professional development

■ Provide regular and rigorous professional development opportunities for all staff.

Administrative support and faculty development appear to be another key to successful programming. A study by Gail Platt (1993) looked at the most successful remedial reading program in the state of Texas – The Learning Center at South Plains College which had the highest retention rate among the state's seven community colleges of students who completed remediation. The study found the program had four key elements: 1. A talented, dedicated and dynamic faculty; 2. Diverse student population; 3. Instructional support including facilities, equipment, materials, supplies and administration; 4. Administrative commitment to evaluate programs and services and to document effectiveness. Furthermore, all center faculty possess master's degrees with at least 18 graduate hours in an academic discipline. In 1992-93 all center faculty attended a critical thinking workshop, an academic support conference, and two teleconferences.

It is recommended that all SD staff receive professional development opportunities to help them increase their knowledge of effective learning and teaching practices. Internal professional development workshops could help to bring the entire college faculty closer together for greater integration of programming in:

1. Learning styles and differences
2. Teaching styles and differences
3. Learning disabilities
4. Theme integration
5. Contextual learning
6. Integration among staff

■ Integrate staff and departments throughout the college through teaching, orientations, and program design.

McMillan (1997) cites recommendations for faculty and staff including volunteer placement of faculty in DE programs. DE faculty should maintain contact with instructors who teach college-level courses.

Institutional Policies

■ Require completion of DE courses before enrolling in college courses in order to give every student the opportunity for success in college level coursework and provide all students a chance to discover the power of successful learning.

Weissman (1997) concludes there are four policies colleges need to consider regarding enrollment of developmental education programs: 1. Underprepared students should be required to enroll in a program of developmental education; 2. Underprepared students should be required to begin their developmental education program on initial enrollment; 3. Underprepared students should be allowed to enroll in college-level courses before completing their developmental education programs as long as they are simultaneously working on remediation; and 4. Students underprepared in reading and writing and students underprepared in reading, writing, and math should be required to focus on their developmental education program before beginning college-level courses.

- Increase requirement for writing.

The counselors said they see students struggle with writing not only in English Composition courses, but others like Criminal Justice. Poor writing skills lead to frustration and failure. Sometimes they set themselves up for failure by taking college courses.

- Require orientations.

McMillan (1997) determined one of the policies of a successful program is a required orientation for entering students.

- Increase technology to support initiatives.

Counselors said there is an untimed assessment test available that better assesses the true ability of students, but they do not see it as being implemented on a full-scale because students need access to computers to take the test, and the college may not be equipped to handle that kind of testing.

1. Support college-wide use of Compass and other computer-based assessment programs.

2. Consider adjusting or modifying student data into a single database allowing for changes or modifications, and a general overall information system of students' experiences.

- Consider rescinding partial or full Pell Grant refunds for students who drop courses or complete with less than a C grade.

Policies on financial aid grant refunds allow students to retain refunds even if they eventually withdraw from class. Staff interviews indicate students sign up for one credit SD courses to get a greater amount of financial aid.

- Set policies according to the mission of the institution.

Literature supports the need to connect program design directly to the institutional mission.

Conclusion 25

The college's Skills Development program provides strong student support, caring faculty and a variety of instructional approaches. Students appreciate the flexibility of the staff and the program. The reasons students gave for withdrawing from the program are multidimensional: conflicts with difficult college-level courses, comfort level of instruction and course expectations, level of motivation and self-esteem, and external factors. Staff indicated another influence on student retention is the ability of staff to understand and meet the needs of individual learners. Appropriate assessment tools and academic placement seems to have a direct relationship to student success. Also, that the student population being served by the SD program is a population that has the capacity to succeed is an important factor in the program's retention rate. Access to accurate data regarding program participants is important in accurately measuring the program's success. Part of that data includes a definition of completer that recognizes that students who accelerate beyond the program by passing a second ASSET test have met the goal of the program. Finally, the difficulties students experience in transitioning from SD courses to regular college-level courses and the consequences that students experience from not enrolling in SD courses indicate an interconnectedness of SD courses to college-level programs.

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